



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 3561

August 14, 2009

Youval Saly
Chief Executive Officer
Pimi Agro CleanTech, Inc.
1209 Orange Street
Wilmington, Delaware 19801

**Re: Pimi Agro CleanTech, Inc.
Amendment No. 2 to
Registration Statement on Form S-1
Filed August 3, 2009
File No. 333-158986**

Dear Mr. Saly:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Management's Discussion and Analysis, page 11

1. We note the statement that "management believes that there is currently no other solution available, other than SpuDefender, that suppresses sprouting while at the same time preventing yield and quality losses. Such statements appear promotional, especially given the current status of the product, which has not

obtained necessary regulatory approval, and should be removed.

2. Please reconcile your statement on page 11 that the regulatory process “is anticipated to be twelve months until receipt of temporary permits in the EU member states, and six to nine months in the United States” with your disclosure on page 21 that in Europe “the valuation period of the file by the reporting country will take up to 2 years” and that once the active ingredient has been approved by the European Commission “The process of registration of our other products is expected to take at least one year from the date of filing” and your disclosure on page 21 that in the United States “the registration process will last between eight to twelve months” and “the registration and approval of our other products will take between 4-6 months from submission of the respective files.”

Business, page 15

3. We reissue comment seven of our letter dated July 14, 2009. Please provide a basis for many of the statements in this section or remove. For example, we note the following statements:
 - Your statements on page 17 that StoreGuard is “designed to” prevent a majority of crop skin diseases, that STHP “is known” to oxidize bacteria and fungi, that StoreGuard is effective on fruits, and that it extends shelf life on supermarket shelves and in consumers’ homes. Additionally, please clarify the meaning of the statement that StoreGuard was “effective” in preventing quantity and quality losses related to dehydration, bacteria and fungal diseases in cabbage relative to cabbage stored in regular conditions;
 - Your statements on page 17 that SeedGuard is “highly effective” in controlling diseases caused by the major pathogens and “is able to control” seedborne diseases.
 - Your statement on page 28 that by use of your products and technologies “management believes that the shelf life of stored crops can be extended.”
4. We note your response to comment eight of our letter dated July 14, 2009, and the sources you have cited. Please briefly summarize the data and results from each test supporting your assertions that SpuDefender has the benefits of anti-sprouting, disease control, preventing dehydration and shrinkage, enhancing fry color for processed potatoes, and reducing suffocation, dehydration, and microbial attack. To the extent that the data and/or results indicate potential weaknesses or limitations to your products, provide clear disclosure.
5. We note your response to comment nine of our letter dated July 14, 2009. Please clarify whether the 4-6 month process for registration and approval of your other products with the EPA will begin after the registration and approval of SpuDefender is complete.

6. Please reconcile your statement on page 21 that the EPA registration process “will take up to nine months” with your statement on page 21 that in the U.S. “the registration process will last between eight to twelve months.”
7. We note your response to comment 11 of our letter dated July 14, 2009. You state on page 21 that “we assume that successful storage results in these pilot rooms will enable us to step into full commercial usage during the 2010 potatoes season.” Please clearly state the basis for your assumption or remove.
8. We note your response to comment 12 of our letter dated July 14, 2009, and we reissue the comment. Please reconcile the disclosure on page 22, which indicates that the term of the agreement with Omex is five years, with the agreement filed as exhibit 10.20 states that the agreement will expire on December 31, 2012. Since the agreement was entered into January 7, 2009, this agreement had a term of less than four years. In addition, please disclose on page 22 the terms of the agreement with Omex Agriculture Ltd. For instance, clearly state the minimum sales targets and the targets for continued exclusivity. Also, discuss the rebate programme.
9. We note your disclosure on page 22 that your Ukrainian import contract with Gaben LLC expired in September 2008. Please disclose how you have imported or will import SpuDefender and SeedGuard for Kraft Food trials in Ukraine for the upcoming season.
10. We note your disclosure on page 23 regarding McDonalds, McCain, Pepsico/Frito-Lay, and Target. You state that “in certain cases” these companies have provided active recommendations to their suppliers to test your technology. Please clarify whether each of these companies has made such “active recommendations.” In addition please disclose whether the recommendations, definitions, and role were the same in each case as you describe on page 23. Lastly, clearly state, if true, that you have no agreements with these companies.
11. We partially reissue comment six of our letter dated July 14, 2009. Please clearly state your competitive position in the industry. For example, it appears that many of your competitors are established companies with longer operating histories and greater financial resources than your company.

Executive Compensation, page 37

12. We note your response to comment 20 of our letter dated July 14, 2009 and we reissue the comment. In the Director Compensation Table please disclose the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with FAS 123R for all option awards granted in 2008, including those granted to Mr. Treger. Additionally, please adjust your disclosure in response to comment 21 accordingly. See Item 402(r)(2)(iv) of

Regulation S-K.

Form S-1/A No. 2 Registration Statement

General - Financial Statements

13. Please amend your registration statement to include updated financial statements for an interim period ending within 135 days of the date your registration statement becomes effective. The financial statements must be current at the date on which the registration statement is filed as well as the date on which the registration statement becomes effective pursuant to Rule 8-08 of Regulation S-X.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. In your responses, please include the page numbers of the amendment where we can find the changes. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Any questions regarding the accounting comments may be directed to Yolanda Guobadia at (202) 551-3562. Questions on other disclosure issues may be directed to John Dana Brown at (202) 551-3859 or Pamela Howell at (202) 551-3357.

Sincerely,

John Reynolds
Assistant Director

cc: Marc J. Ross, Esq.
Fax (212) 930-9725